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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/715,264	11/17/2003	Nathan R. Brown	2269-4375.3US (99-1029.03	5086

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EXAMINER	
MACARTHUR, SYLVIA	
ART UNIT	**PAPER NUMBER**
1763	

DATE MAILED: 04/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/715,264	BROWN, NATHAN R.	
	Examiner	Art Unit	
	Sylvia R. MacArthur	1763	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 January 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *17 November 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 4265 10/2005 10/19/05
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sommer (US 6,561,871) in view of Sahota et al (US 5,665,199).

Sommer teaches a linear drive system for CMP.

Re Claims 1, 8, 9: The method of Sommer teaches selectively applying a plurality of different amounts of pressure to different, selected locations of a backside of the semiconductor device structure and a polishing or planarizing at least one layer of the surface of the semiconductor device structure, see col. 15 lines 5-67.

Re Claims 2, 7, 11, 12: The polishing discussed in Sommer is CMP according to the title.

Re Claim 6, 13 and 14: The different amounts of pressure are provided by biasing independently movable pressurization structures, see col. 15 lines 15-20.

Re Claim 10: The selectively applying a plurality of different amounts of pressure and the polishing or planarizing together effect the formation of a substantially planar surface on the semiconductor device structure, see the abstract.

Re Claims 4,5: At least one raised surface has been located and the adequate pressure applied to planarize see col. 16 lines 3-32.

Re Claim 14: The polishing of Sommer comprises forming a substantially planar surface on the semiconductor device structure, see abstract.

Sommer fails to polishing a second semiconductor structure based on the applied pressure of the first.

Sahota et al teaches a methodology of rdeveloping product specific interlayer dielectrid polish processes. Sahota et al illustrates in Fig. 4, the polishing of a first wafer and measuring the topography of that first wafer, then using the first data points to polish a subsequent wafer. Topograsphy (surface profile measurements) is discussed in col. 17 lines 18-26 and col.15 lines 45-67.

The motivation to modify the teachings of Sommer is to enhance the capabilities of the apparatus from the application of pressure to a specific wafer to wafers in an entire lot or batch. The combined teachings of Sommer and Sahota et al will increase throughput and the uniformity of polishing with a lot of wafers.

7. Claims 1-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Chen et al(US 6,436,828) in view of Sahota et al (US 5,665,199).

Chen et al teaches CMP using magnetic force.

Re Claims 1, 8, 9: The method of Chen et al teaches selectively applying a plurality of different amounts of pressure to different, selected locations of a backside of the semiconductor device structure and a polishing or planarizing at least one layer of the surface of the semiconductor device structure, see col. 6 lines 23-31.

Re Claim 6, 13, and 14: The different amounts of pressure are provided by biasing independently movable pressurization structures (magnetic coils), see abstract and col. 4 lines 45-60.

Re Claims 2,7, 11, 12:The polishing discussed in Chen et al is CMP according to the title.

Re Claim 10: The selectively applying a plurality of different amounts of pressure and the polishing or planarizing together effect the formation of a substantially planar surface on the semiconductor device structure, see the abstract and col. 6 lines 23-31.

Re Claims 4, 5: At least one raised surface has been located and the adequate pressure applied to planarize see col. col. 5 lines 59-67 and col. 6 lines 23-31.

Re Claim 14: The polishing of Chen et al comprises forming a substantially planar surface on the semiconductor device structure, see abstract.

Chen et al fails to polishing a second semiconductor structure based on the applied pressure of the first.

Sahota et al teaches a methodology of rdeveloping product specific interlayer dielectrid polish processes. Sahota et al illustrates in Fig. 4, the polishing of a first wafer and measuring the topography of that first wafer, then using the first data points to polish a subsequent wafer. Topograsphy (surface profile measurements) is discussed in col. 17 lines 18-26 and col.15 lines 45-67.

The motivation to modify the teachings of Sommer is to enhance the capabilities of the apparatus from the application of pressure to a specific wafer to wafers in an entire lot or batch. The combined teachings of Chen et al and Sahota et al will increase throughput and the uniformity of polishing with a lot of wafers.

Response to Arguments

8. Applicant's arguments, filed 1/23/2006, with respect to the rejection(s) of claim(s) 1-14 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Sahota et al. Sahota et al teaches the use of data points from measuring the topography of a polished wafer to determine the polishing parameters of a subsequent wafer's polishing routine.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sylvia R. MacArthur whose telephone number is 571-272-1438. The examiner can normally be reached on M-F during the hours of 8:30 a.m. and 5 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on 571-272-1435. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sylvia R MacArthur
Patent Examiner
Art Unit 1763

April 13, 2006